



# ***U.S. Department of Energy's Office of Science***

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## **2005 Workshop on Facilities and Infrastructure**

### **Project Management Update**

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# Topics

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- Project Reviews
  - External Independent Reviews (EIRs)
  - Internal Project Reviews (IPRs)
- Project Assessment and Reporting System (PARS)
- Project Management Career Development Program (PMCDP)



# EIR Basics

- DOE M 413.3-1, Project Management for the Acquisition of Capital Assets, requires EIRs be performed by Office of Engineering and Construction Management (OECM).
  - Prior to CD-2 for all projects (>\$5M)
  - Prior to CD-3 for Major Systems (>\$400M)
  - To validate a new baseline as a result of a deviation (a limited EIR)
- Tailoring of the EIR is encouraged based on scope and size of project
- SC preference is to conduct on-site EIRs rather than “desk top” reviews.
- SC now contributes to EIR funding



# EIR Scope

1. Resource Loaded Schedule
2. TPC & Project Schedule
3. Work Breakdown Structure
4. Risk Management
5. Preliminary Design & Design Review
6. System Functions & Requirements
7. Hazards Analysis
8. Value Management/Engineering applicability
9. Project Controls/Earned Value Management System
10. Project Execution Plan
11. Start-up Test Plan
12. Acquisition Strategy
13. Integrated Project Team



# Selected Lessons Learned

- **Resource Loaded Schedule:** Integration of scope, schedule, and cost of WBS elements. Basis of estimate, assumptions, and reasonableness of cost and schedule reviewed in detail.
- **TPC & Project Schedule:** Critical Path is defined; assessment of schedule integration; are activity durations reasonable? Are all activities included and is the project funding profile consistent with the resource loaded schedule.
- **Risk Management:** Identify project risks & if all appropriate risk mitigation actions have been incorporated into the baseline & how cost & schedule contingency tie to the risks identified.
- **Hazard Analysis:** Adequacy & integration with risk analysis & mitigation
- **Miscellaneous:** Duplication or omission of cost items, traceability, drawings inconsistent with lists of cost items, escalation application, etc.



# IPR Basics

- In addition to EIRs, DOE M 413.3-1, requires IPRs be performed prior to CD-3
- for Major Systems IPRs are also required prior to CD-0
- IPRs are conducted by SC-1.3, Office of Project Assessment
- For projects with Total Project Cost (TPC) greater than \$20M or more, on-site reviews are conducted
- For project less than \$20M, “desk top” reviews are performed



# IPR Scope

- **Management organization**, staffing, and work assignment process
- Completeness and quality of **final drawings and design specifications**
- Assess if the project can be delivered within the **cost and schedule baselines** established
- Ensure **ES&H requirements** have been established and project is ready for construction
- Assess whether the **risk assessment** has been updated, as appropriate, and to address any new risks identified in final design.
- Assess the application of **Value Management/Engineering** during Final Design, and if results have been incorporated into the baseline.
- If **procurement and contracting requirements** have been established and adequate resources are available
- Assessment of **project management control systems**, baseline and technical work management, quality management, and ES&H/NEPA compliance.



# Project Assessment and Reporting System (PARS)

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## DOE M 413.3-1 Requirements

- For projects with approved CD-0, project data must be entered in PARS and **updated monthly**.
- For projects at CD-2, project performance is to be reported monthly in PARS;
- For projects at CD-2, and project TPC is greater than \$20M, earned value data, compliant with the ANSI/EIA-748 standard must be entered monthly.





# Project Assessment and Reporting System (PARS)

## **SC Program Managers and Project Directors can improve the quality of SC's performance report by:**

- Updating the project status in PARS monthly by the last day of the month of the reporting period.
- Verifying the earned value data currently entered in the system and the system calculated performance indices are accurate.
- Providing data for as many fields as possible in the PARS.
- Providing meaningful narrative explanations directly focused on events causing cost and schedule performance variances.



# Project Assessment and Reporting System (PARS) Changes

**Several external assessments (March 2005 GAO, NRC 2003, etc.) of DOE project management cited improvements that are needed in PARS.**

**In response to these recommendations OECM is making (or have made) changes to PARS that includes:**

- Making some of the previously optional data fields mandatory
- Capturing and retaining baseline history
- Simplifying some data entry and reporting screens
- Updating user manual and training documents
- OECM is also establishing a user group to identify deficiencies and to make improvements to the system



# DOE FPD Certification Status

## May 2005



*Office of Management, Budget  
and Evaluation  
Office of Engineering and  
Construction Management*

## Federal Project Director Certification Status

Program	Number of Certified FPDs <sup>(1)</sup> (On Board)	Minimum Number of Certified FPDs <sup>(2)</sup> Required
NNSA	33	34
EM <sup>(3)</sup>	10	59
SC	16	18
RW	3	3
OTHER	9	12

(1) As reported by Program offices, on their payroll. May or may not be an incumbent on a project at this time.

(2) Incumbent Federal Project Directors must be certified to their appropriate level by May 31, 2006.

(3) EM has 10 projects that will transition to NNSA and will require an additional 4-5 certified FPDs.



# SC PMCDP Update

- As of May 2005, 16 of 18 incumbent SC Federal Project Directors certified
- All SC incumbents should be certified by July 2005
- Focus will be shifting to maintenance requirements
- SC “Aspirants” will be considered on a case-by-case basis (Site Manager should coordinate with SC 1.3 prior to submitting certification requests)
- Continually evolving – best characterization of certification requirements and process
- Participation in PMCDP sponsored training is encouraged (feedback also encouraged)
- Certification information provided at: <http://oecm.energy.gov>